WHAT IS CLAIMED IS:

1. A head drum assembly of a tape recorder comprising:

a rotary drum and a stationary drum which are engaged on a shaft one on the other and parallel to each other;

an upper bearing and a lower bearing which are located between the rotary drum and the shaft one on the other; and

a preload means for applying preloads to the upper and the lower bearings,

wherein the preload means includes a resilient body disposed on an axial core of the stationary drum to be located on an outer circumference of the shaft, the resilient body for upwardly pressing an inner race of the lower bearing.

2. The head drum assembly of claim 1, wherein the resilient body is a compression coil spring.

3. The head drum assembly of claim 1, wherein a diameter of an inner race of the upper bearing is larger than a diameter of the shaft.

4. The head drum assembly of claim 1, wherein a diameter of the inner race of the lower bearing is larger than a diameter of the shaft.

5. The head drum assembly of claim 1, wherein the inner race of the lower bearing is bonded to the shaft.

6. A method of applying preloads to bearings of a head drum assembly of a tape recorder, the head drum assembly including a rotary drum and a stationary drum which are engaged on a shaft one on the other and parallel to each other, and an upper bearing and a lower bearing which are disposed between the rotary drum and the shaft one on the other, the method comprising preloading an upper bearing and preloading a lower bearing , wherein the step of preloading the upper bearing comprises:

press-fitting downwardly the upper bearing so that an inner race of the upper bearing is pressed upward in a close contact with an outer circumference of the shaft;

and

press-fitting downwardly the upper bearing so that an outer race of the upper bearing is pressed upward in a close contact with an inner circumference of a recess at a center of upper side of the rotary drum.

7. A method of applying preload to bearings of a head drum assembly of a tape recorder, the head drum assembly including a rotary drum and a stationary drum which are engaged on a shaft one on the other and parallel to each other, and an upper bearing and a lower bearing which are disposed between the rotary drum and the shaft one on the other, the method comprising preloading an upper bearing and preloading a lower bearing, wherein the step of preloading the lower bearing comprises;

press-fitting upwardly the lower bearing so that an outer race of the lower bearing is pressed downwardly in a close contact with an inner circumference of a recess at a center of under side of the rotary drum, and slidably engaging an inner race of the lower bearing on an outer circumference of the shaft; and

mounting a resilient body to be supported on the stationary drum, and press-fitting the stationary drum onto the shaft so that the resilient body presses an inner race of the lower bearing upwardly.

8. A method of applying preload to bearings of a head drum assembly of a tape recorder, the head drum assembly including a rotary drum and a stationary drum which are engaged on a shaft one on the other and parallel to each other, and an upper bearing and a lower bearing which are disposed between the rotary drum and the shaft one on the other, the method comprising preloading an upper bearing and preloading a lower bearing, wherein the step of preloading the upper bearing comprises;

press-fitting downwardly the upper bearing so that an inner race of the upper bearing is pressed upward in a close contact with an outer circumference of the shaft; and

press-fitting downwardly the upper bearing so that an outer race of the upper bearing is pressed upward in a close contact with an inner circumference of a recess at a center of upper side of the rotary drum; and

wherein the step of preloading the lower bearing comprises;

press-fitting upwardly the lower bearing so that an outer race of the lower bearing is pressed downward in a close contact with an inner circumference of a recess at a center of under side of the rotary drum, and concurrently engaging the lower bearing so that an inner race of the lower bearing slides along an outer circumference of the shaft; and

mounting a resilient body to be supported on the stationary drum, and press-fitting the stationary drum onto the shaft so that the resilient body presses an inner race of the lower bearing upwardly.

9. The method of claim 7, wherein the resilient body is a compression coil spring.

10. The method of claim 8, wherein the resilient body is a compression coil spring.

11. The method of claim 7, wherein a diameter of the inner race of the upper bearing is larger than a diameter of the shaft.

12. The method of claim 8, wherein a diameter of the inner race of the upper bearing is larger than a diameter of the shaft.

13. The method of claim 7, wherein a diameter of the inner race of the lower bearing is larger than a diameter of the shaft.

14. The method of claim 8, wherein a diameter of the inner race of the lower bearing is larger than a diameter of the shaft.

15. The method of claim 7, further comprising the step of bonding the inner race of the lower bearing to the shaft.

16. The method of claim 8, further comprising the step of bonding the inner race of the lower bearing to the shaft.